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10/525,455	02/23/2005	Alain Teil	FR 020089	4903

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EXAMINER

PEREZ, JAMES M

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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10/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/525,455

Applicant(s)

TEIL ET AL.

Examiner

James M. Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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Detailed Action

Claim Objections

1. Claims 1-5, and 7-8 are objected to because of the following informalities:

(1) Claims 1-3 and 7-8 must set forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation, 37 CFR1.75(i).

(2) Claims 4-5 are objected to because there are no transitional phrases, for example, "comprising", "consisting essentially of" and "consisting of" in the claims. The transition phrases "comprising", "consisting essentially of" and "consisting of" define the scope of claim with respect to what additional claim components or steps, if any, are excluded from the scope of the claims.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Sisalem et al. (The Loss-Delay Based Adjustment Algorithm: A TCP-Friendly Adaptation Scheme).

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With regards for claim 1, Sisalem et al. teaches a data transmission system comprising:

at least a transmitter having an adaptable sending rate (**Section 1: paragraph 6**);

a transmission channel having a time varying capacity (**Section 1: paragraph 6-7, 10-11**);

a receiver having data control means for detecting losses and feedback means for reporting said losses to the transmitter (**Section 3: paragraph 1**); and

said transmitter having probing means for probing the transmission channel by repeatedly raising its sending rate until a loss is reported by the receiver (**Section 3: paragraph 1**), characterized in that

said receiver is designed to report a fake loss when the sending rate has risen to the current capacity of the transmission channel (**Sections 3.1, 3.2, and 3.3: paragraphs 5-6, paragraphs 1-3, paragraphs 1-3 respectively: note that without loss, when transmission rate equals the bottleneck bandwidth the transmission rate stops increasing**) so as to force the transmitter to terminate said probing (**the transmission rate would stop increasing especially in the case that there was only one multicast user**).

With regards to claim 2, Sisalem et al. further teaches a data transmission system as claimed in claim 1, characterized in that said receiver is further designed to:

compute a received rate that is an estimation of the rate at which data are received (**Section 3.1: paragraphs 4-6: note that bottleneck router data rate “b” is**

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amount of data which can pass through the router over a period of time which inherently is the received data rate); and

monitor the evolution of said received rate for deciding whether the sending rate has risen to the current capacity of the transmission channel (**Sections 3.1, 3.2, and 3.3: paragraphs 5-6, paragraphs 1-3, paragraphs 1-3 respectively**).

With regards to claim 3, Sisalem et al. further teaches a data transmission system as claimed in claim 1 or 2, characterized in that said transmitter comprises:

rate control means for dynamically adapting the sending rate to the current capacity of the transmission channel when said probing is terminated (**Sections 3.1, 3.2, and 3.3: paragraphs 5-6, paragraphs 1-3, paragraphs 1-4 respectively**).

With regards to claim 4, Sisalem et al. teaches a receiver intended to receive data sent by a transmitter at an adaptable sending rate (**Section 1: paragraph 6**) through a transmission channel having a time varying capacity (**Section 1: paragraph 6-7, 10-11**),

said receiver having data control means for detecting losses and feedback means for reporting said losses to the transmitter (**Section 3: paragraph 1**), characterized in that,

said sending rate is repeatedly raised for probing the transmission channel until a loss is reported by the receiver (**Section 3: paragraph 1**),

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said receiver is designed for reporting a fake loss when the sending rate has risen to the current capacity of the transmission channel so as to force the transmitter to terminate said probing (**Sections 3.1, 3.2, and 3.3: paragraphs 5-6, paragraphs 1-3, paragraphs 1-3 respectively: note that without loss, when transmission rate equals the bottleneck bandwidth the transmission rate stops increasing**).

With regards to claim 5, Sisalem et al. further teaches a receiver as claimed in claim 4, characterized in that it (**the receiver**) is further designed to

compute a received rate that is an estimation of the rate at which data are received (**Section 3.1: paragraphs 4-6: note that bottleneck router data rate “b” is amount of data which can pass through the router over a period of time which inherently is the received data rate**), and

monitor the evolution of said received rate for deciding whether the sending rate has risen to the current capacity of the transmission channel (**Sections 3.1, 3.2, and 3.3: paragraphs 5-6, paragraphs 1-3, paragraphs 1-3 respectively**).

With regards to claim 6, Sisalem et al. teaches a rate control method (**Section 1: paragraph 6**) to be used for transmitting data from a transmitter having an adaptable sending rate to a receiver (**Section 1: paragraph 6**) designed for detecting losses and reporting losses to said transmitter (**Section 3: paragraph 1**), through a transmission channel having a time varying capacity (**Section 1: paragraph 6-7, 10-11**), said rate control method comprising the steps of:

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repeatedly raising the sending rate for probing the transmission channel until a loss is reported by the receiver (**Section 3: paragraph 1**); and

reporting of a fake loss when the sending rate has risen to the current capacity of the transmission channel (**Sections 3.1, 3.2, and 3.3: paragraphs 5-6, paragraphs 1-3, paragraphs 1-3 respectively: note that without loss, when transmission rate equals the bottleneck bandwidth the transmission rate stops increasing**) so as to force the transmitter to terminate said probing phase (**the transmission rate would stop increasing especially in the case that there was only one multicast user**).

With regards to claim 7, Sisalem et al. further teaches a rate control method as claimed in claim 6, characterized in that it further comprises:

a step of calculating a received rate at the receiver, said received rate being an estimation of the rate at which data are received (**Section 3.1: paragraphs 4-6: note that bottleneck router data rate “b” is amount of data which can pass through the router over a period of time which inherently is the received data rate**); and

a step of monitoring the evolution of said received rate for deciding whether the transmitter sending rate has risen to the current capacity of the transmission channel (**Sections 3.1, 3.2, and 3.3: paragraphs 5-6, paragraphs 1-3, paragraphs 1-3 respectively**).

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sisalem et al. (The Loss-Delay Based Adjustment Algorithm: A TCP-Friendly Adaptation Scheme) in view of Hottinen (USPN 6167038).

With regards to claim 8, Sisalem et al. teaches the receiver steps of a rate control method of claims 6 or 7.

Sisalem further teaches a program (**Section 1: paragraphs 10-11: LDA algorithm**).

Sisalem et al. is silent to teaching a program comprising instructions for implementing the receiver steps of the rate control method when said program is executed by a processor.

Hottinen teaches a program (**col. 3, lines 57-68**) comprising:

instructions for implementing the receiver steps of the rate control method when said program is executed by a processor (**col. 5, lines 27-53**).

Therefore it would be obvious to one of ordinary skill in the art at the time the invention was made to modify Sisalem et al. in view of Hottinen in order to create an enhanced communication system with improved quality of the received signal (**col. 2,**

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lines 7-8) and to implement the method (**Hottinen: col. 3, lines 57-68: algorithm**) in the disclosed communication system and allow improved performance of the control and calculation circuitry which adaptively change to the communication channel (**Hottinen: col. 5, lines 27-53**).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Perez whose telephone number is 571-270-3231. The examiner can normally be reached on Monday through Friday: 9am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
10/15/2007



**SHUWANG LIU
SUPERVISORY PATENT EXAMINER**